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ATTORNEY DOCKET NO. APPLICATION NO. FILING DATE FIRST NAMED INVENTOR CONFIRMATION NO. 3078 31671-178057 10/088,567 03/19/2002 Shizuo Akira **EXAMINER** 06/26/2006 26694 7590 HORNING, MICHELLE S VENABLE LLP P.O. BOX 34385 PAPER NUMBER ART UNIT WASHINGTON, DC 20045-9998 1648

DATE MAILED: 06/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/088,567	AKIRA ET AL.
	Examiner	Art Unit
	Michelle Horning	1648
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply		
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING D/ Extensions of time may be available under the provisions of 37 CFR 1.1: after SIX (6) MONTHS from the mailing date of this communication.  If NO period for reply is specified above, the maximum statutory period v Failure to reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION  36(a). In no event, however, may a reply be to the second will expire SIX (6) MONTHS from the cause the application to become ABANDON	N. imely filed in the mailing date of this communication. ED (35 U.S.C. § 133).
Status		
1) Responsive to communication(s) filed on <u>09 M</u> 2a) This action is <b>FINAL</b> . 2b) This 3) Since this application is in condition for allower closed in accordance with the practice under E	action is non-final.  nce except for formal matters, p	
Disposition of Claims		
4) ☐ Claim(s) <u>1-34</u> is/are pending in the application. 4a) Of the above claim(s) is/are withdray 5) ☐ Claim(s) is/are allowed. 6) ☐ Claim(s) is/are rejected. 7) ☐ Claim(s) is/are objected to. 8) ☐ Claim(s) <u>1-34</u> are subject to restriction and/or example.	wn from consideration.	
Application Papers		
9) The specification is objected to by the Examine 10) The drawing(s) filed on is/are: a) acce Applicant may not request that any objection to the Replacement drawing sheet(s) including the correct 11) The oath or declaration is objected to by the Ex	epted or b) objected to by the drawing(s) be held in abeyance. So tion is required if the drawing(s) is o	ee 37 CFR 1.85(a). bjected to. See 37 CFR 1.121(d).
Priority under 35 U.S.C. § 119		
12) Acknowledgment is made of a claim for foreign a) All b) Some * c) None of:  1. Certified copies of the priority document: 2. Certified copies of the priority document: 3. Copies of the certified copies of the priority application from the International Bureau * See the attached detailed Office action for a list	s have been received. s have been received in Applica rity documents have been receiv u (PCT Rule 17.2(a)).	tion No ved in this National Stage
Attachment(s)  1)  Notice of References Cited (PTO-892)	A) 🗍 Intention Commen	ov/PTO 412)
Notice of References Cited (PTO-692)     Notice of Draftsperson's Patent Drawing Review (PTO-948)     Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)     Paper No(s)/Mail Date	4) Interview Summar Paper No(s)/Mail I 5) Notice of Informal 6) Other:	

## **DETAILED ACTION**

Claims 4, 7, 13, 14, 16, 20, 21, 26, 27 and 30 have been amended. Claims 31, 32, 33 and 34 are newly added claims.

## Election/Restrictions

Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group I, claim(s) 1-7, 16, 22 and 30, drawn to DNA encoding a receptor protein that specifically recognizes bacterial DNA having an unmethylated CpG sequence and a host cell expressing the DNA.

Group II, claim(s) 8-13 and 28, drawn to a receptor protein that specifically recognizes bacterial DNA having an unmethylated CpG sequence and a host cell expressing said protein.

Group III, claim(s) 14-15, drawn to drawn to an antibody.

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Group IV, claim(s) 17-20 and 31, drawn to non-human animals with a gene encoding a receptor protein that specifically recognizes bacterial DNA having an unmethylated CpG sequence.

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Group V, claim(s) 21, drawn to a method of restoring expression of a protein having reactivity with bacterial DNA.

Group VI, claim(s) 23, drawn to an *in vitro* method of screening for an agonist or antagonist.

Group VII, claim(s) 24-26 and 32, drawn to an *in vivo* method of screening for an agonist or antagonist.

Group VIII, claim(s) 27, 29 and 33-34, drawn to an agonist or antagonist.

The inventions listed as Groups I-X do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons:

The claims are directed to a DNA encoding a receptor protein that specifically recognizes bacterial DNA having an unmethylated CpG sequence, which is the first product. However, because Hemmi et. al. (cited in the IDS) is drawn to a receptor

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protein (TLR9) encoded by immune cells that recognizes bacterial DNA containing unmethylated CpG dinucleotides, no special technical feature exists for Groups I-X as defined by PCT Rule 13.2, because it does not define a contribution over the prior art. Note that PCT Rule 13 does not provide for multiple products or methods within a single application. Because the technical feature of Group I is not a special technical feature, unity of invention is lacking.

## Joint Inventors

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle Horning whose telephone number is 571-272-9036. The examiner can normally be reached on Monday-Friday 8:00-5:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bruce Campell can be reached on 571-272-0974. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Patent Examiner

BRUCE R. CAMPELL, PH.D. SUPERVISORY PATENT EXAMINER **TECHNOLOGY CENTER 1600** 

Bruce Compell